WHAT IS CLAIMED IS:

1.   A method for routing packets to a mobile node comprising the steps of:

providing an address update, including a regional address associated with

5   the mobile node, to a node communicating with the mobile node;

sending packets, from the node communicating with the mobile node, to a node associated with the regional address;

receiving packets at the node associated with the regional address;

determining, at the node associated with the regional address, the current

10   address of the mobile node;

routing the received packets to a node associated with the current address of the mobile node;

forwarding packets, from the node associated with the current address, to the mobile node.

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2.   The method of claim 1, wherein the packets are sent between the node communicating with the mobile node and the mobile node in accordance with mobile Internet Protocol version 6 (MIPv6) protocol.

20   3.   The method of claim 1, wherein the node associated with the regional address implements mobility anchor point functionality.

4.   The method of claim 1, wherein the node associated with the current address is an access router.

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5.   The method of claim 1, further comprising the step of:

receiving a message, from the node associated with the mobile node's current address, by the mobile node,

wherein the message indicates the availability of nodes which can be used as regional addresses for the mobile node.

6.   The method of claim 5, wherein the nodes which can be used as regional addresses for the mobile node have mobility anchor point functionality and wherein the message is a router advertisement containing a mobility anchor point option.

7.   The method of claim 5, further comprising the step of:

receiving the message by the node associated with the mobile node's current address, wherein the message is received by the node associated with the mobile node's current address via a hierarchy of routers.

8.   The method of claim 5, further comprising the step of:

selecting, by the mobile node, a new regional address based upon information contained in the message.

9.   The method of claim 8, wherein the new regional address is selected based upon one of a distance of a node associated with the new regional address and the mobile node and a preference for the node associated with the new regional address.

10.   The method of claim 9, wherein the preference for the node associated with the new regional address is based upon one of network loading, network failures and local network policies.

11. The method of claim 1, wherein the packets are sent from the node communicating with the mobile node to the mobile node without being routed by a home agent associated with the mobile node.

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12. The method of claim 1, further comprising the steps of:

sending an update message from the mobile node to the node associated with the mobile node's regional address, wherein the update message includes an address associated with a node which the mobile node will be using as its new regional address;

10 receiving packets by the node associated with the mobile node's regional address; and

forwarding the received packets to the node associated with the mobile node's current address and to the node associated with the mobile node's new regional address.

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13. The method of claim 12, wherein the update message is a binding update and wherein the binding update includes an indication that the mobile node is registering with the node associated with the mobile node's new regional address, that the mobile node requires bi-casting of packets and the length of time

20 for which bi-casting of packets is required.

14. The method of claim 1, further comprising the steps of:

sending a message, from the mobile node to the node associated with the mobile node's regional address, requesting that packets be routed to the mobile

25 node's current address and at least another one of the mobile node's current addresses;

routing a first group of packets, from the node associated with the mobile node's regional address, to a node associated with the mobile node's current

address; and

routing a second group of packets, from the node associated with the mobile node's regional address, to a node associated with the with the at least another one of the mobile node's current addresses.

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15.   The method of claim 14, further comprising the step of:

determining, by the node associated with the mobile node's regional address, a load on the node associated with the mobile node's current address and a load on the node associated with the at least another one of the mobile node's

10   current addresses, wherein packets are selected for the first group or the second group based on the determined loads.

16.   The method of claim 14, wherein the message is a binding update.

15   17.   A network comprising:

a mobile node;

a node communicating with the mobile node, wherein the mobile node provides an address update, including a regional address associated with the mobile node, to the node communicating with the mobile node;

20   a node associated with the regional address, wherein the node communicating with the mobile node sends packets to the node associated with the regional address;

a node associated with a current address of the mobile node, wherein the node associated with the current address of the mobile node receives packets from

25   the node associated with the regional address of the mobile node and sends the received packets to the mobile node.

18.   The network of claim 17, wherein the network operates in accordance with mobile Internet Protocol version 6 (MIPv6) protocol.

19.   The network of claim 17, wherein the node associated with the regional address implements mobility anchor point functionality.

20.   The network of claim 17, wherein the node associated with the current address is an access router.

21.   The network of claim 17, further comprising:

means for receiving a message, from the node associated with the mobile node's current address, by the mobile node,

wherein the message indicates the availability of nodes which can be used as regional addresses for the mobile node.

22.   The network of claim 21, wherein the nodes which can be used as regional addresses for the mobile node have mobility anchor point functionality and wherein the message is a router advertisement containing a mobility anchor point option.

23.   The network of claim 21, further comprising:

means for receiving the message by the node associated with the mobile node's current address, wherein the message is received by the node associated with the mobile node's current address via a hierarchy of routers.

24.   The network of claim 21, further comprising:

means for selecting, by the mobile node, a new regional address based upon information contained in the message.

25.   The network of claim 24, wherein the new regional address is selected based upon one of a distance of a node associated with the new regional address and the mobile node and a preference for the node associated with the new regional address.

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26.   The network of claim 25, wherein the preference for the node associated with the new regional address is based upon one of network loading, network failures and local network policies.

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27.   The network of claim 17, wherein the packets are sent from the node communicating with the mobile node to the mobile node without being routed by a home agent associated with the mobile node.

28.   The network of claim 17, further comprising:

means for sending an update message from the mobile node to the node

15   associated with the mobile node's regional address, wherein the update message includes an address associated with a node which the mobile node will be using as its new regional address;

means for receiving packets by the node associated with the mobile node's

20   regional address; and

means for forwarding the received packets to the node associated with the mobile node's current address and to the node associated with the mobile node's new regional address.

25   29.   The network of claim 28, wherein the update message is a binding update and wherein the binding update includes an indication that the mobile node

is registering with the node associated with the mobile node's new regional address, that the mobile node requires bi-casting of packets and the length of time for which bi-casting of packets is required.

5   30.   The network of claim 17, further comprising:

means for sending a message to the node associated with the mobile node's regional address requesting that packets be routed to the mobile node's current address and at least another one of the mobile node's current addresses;

means for routing a first group of packets, from the node associated with 10 the mobile node's regional address, to a node associated with the mobile node's current address; and

means for routing a second group of packets, from the node associated with the mobile node's regional address, to a node associated with the with the at least another one of the mobile node's current addresses.

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31.   The network of claim 30, further comprising:

means for determining, by the node associated with the mobile node's regional address, a load on the node associated with the mobile node's current address and a load on the node associated with the at least another one of the 20 mobile node's current addresses, wherein packets are selected for the first group or the second group based on the determined loads.

32.   The network of claim 30, wherein the message is a binding update.

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